IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(Original) A controllable optical lens system, comprising:

a chamber housing first and second fluids (10,12), the interface between the fluids defining a lens surface (15);

an electrode arrangement (14,16) for electrically controlling the shape of the lens surface (15), the electrode arrangement comprising first (14) and second (16) electrodes; and

a power source (60) for supplying current to the electrode arrangement;

means for monitoring the current supplied by the power source over time and deriving the charge supplied;

means (66) for monitoring the voltage on one (16) of the electrodes of the electrode arrangement; and

means (62) for deriving from a desired lens power a value for

controlling the total charge to be supplied to the electrode arrangement (14,16).

2.(Original) A system as claimed in claim 1, wherein the means for deriving a value is for deriving a ratio of the charge supplied to the voltage.

3.(Original) A system as claimed in claim 2, wherein the power source is also for maintaining a constant voltage (V.sub.1), and is controlled to maintain the voltage on the one (16) of the electrodes after the derived ratio between the charge supplied and the voltage has been reached.

4.(Previously Presented) A system as claimed in claim 1, wherein the means for deriving comprises a look-up table (LUT).

5.(Original) A system as claimed in claim 4, wherein the look-up table receives as input an effective electrode height, which depends on the lens power, and provides as output the ratio of the charge supplied to the voltage.

6.(Previously Presented) A system as claimed in claim 1, wherein the electrode arrangement comprises:

a drive electrode arrangement comprising a base electrode (14) and a side wall electrode (16).

7.(Original) A system as claimed in claim 6, wherein the side wall electrode (16) comprises an annular electrode which surrounds the chamber.

8.(Previously Presented) A system as claimed in claim 1, wherein the first fluid (10) comprises a polar and/or conductive liquid and the second fluid (12) comprises a nonconductive liquid.

9.(Original) A method of driving a controllable optical lens, the lens comprising a chamber housing first and second fluids (10,12), the interface between the fluids defining a lens surface (15) and an electrode arrangement for electrically controlling the shape of the lens surface, the electrode arrangement comprising first and second electrodes (14,16), wherein the method comprises:

selecting (30) a desired lens power;

deriving (32) from the desired lens power a value for controlling the total charge to be supplied to the electrode arrangement;

supplying current (34) to the electrode arrangement;

monitoring the current supplied (36) over time and deriving the charge supplied, and monitoring the voltage on one of the electrodes of the electrode arrangement; and

supplying current until the total charge supplied to the electrode arrangement reaches the derived value.

10.(Original) A method as claimed in claim 9, wherein deriving a value (32) comprises deriving a ratio of the charge supplied to the voltage.

11.(Original) A method as claimed in claim 10, further comprising maintaining a constant voltage (40) on the one of the electrodes of the electrode arrangement after the derived ratio between the charge supplied and the voltage has been reached.

12.(Previously Presented) A method as claimed in claim 9, wherein the deriving a value indicating the total charge to be supplied comprises accessing a look-up table.

13.(Original) A method as claimed in claim 12, wherein an effective electrode height is input into the look-up-table, which depends on the lens power, and the ratio of the charge supplied to the voltage is output from the look-up table.